

Console for self-built Hauptwerk Organ Project

Kenneth Spencer, Wiltshire, England. April-June 2009

What to Buy

You will need a considerable quantity of wood. I used planed spruce 1.25" x 1.25" for the outside frame, 1.25" x 0.75" planed spruce for the inside frame parts, some 6.75" x 0.5" planed spruce board for the keyboard manual side cheeks, and 5mm and 6mm ply for the boarding (all are available from Focus / B&Q in the UK).

To decorate the visible edging and to cover the joints between the frame and the boarding I used a lot of 1.2" decorative moulding; this was also used to decorate the front spaces between each keyboard manual. I used a small amount of 1.25" decorative moulding to cover the rear of the upper manual. (This is available from B&Q in the UK).

I strongly advise careful study of the website images showing every stage of the console under construction, as these drawings are probably not sufficiently detailed to give you complete instructions.

For the music stand I used 1.25" x 0.75" planed spruce as a frame and 4mm ply. It was then decorated with the same 1.2" decorative moulding used on the console. See section 6. below for more details.

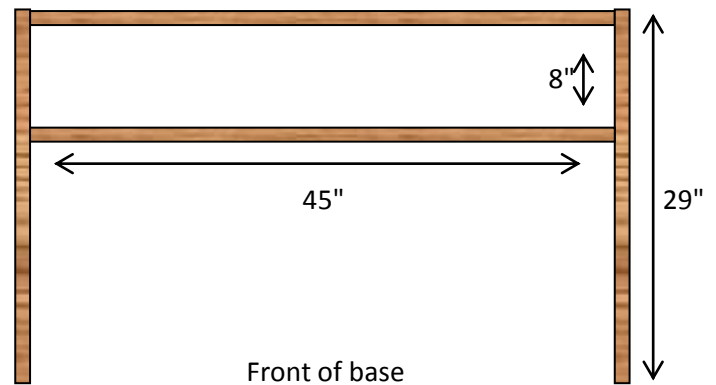
1. The Base

The principle of this console is that it fits snugly around your pedalboard - adjust my dimensions accordingly.

Construct a frame from 1.25" x 1.25" spruce, as shown.

Ensure that its internal width is just right for the toe end of your pedal board to fit tightly - 45" was right for mine.

Screw and glue the joints - they do not need to be mitred as you will be covering the frame with the ply boarding.



2. The Sides

Construct each side, left and right of the console by fixing lengths of 1.25" x 1.25" spruce to the base, inside the frame.

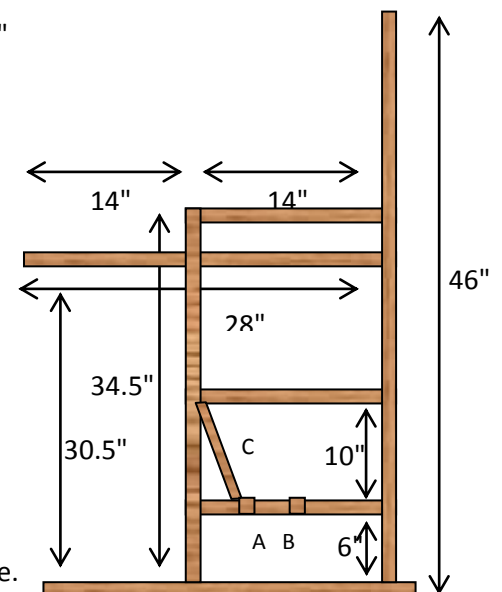
The right side is shown. Construct the left side as a mirror image.

The height of the back (46") can be decided to suit yourself, but the height of the lower manual support should be such that the upper surface of the lower manual keys is 30.5" above the D2 pedal key. Mine needed to be 27.5" above the base to achieve this.

If you have three keyboard manuals, the lower manual support should protrude forward such that its front edge is 10" in front of the D#2 pedal key.

I decided to have a tier set just 3.5" above the lower manual base for the second and third manual. Therefore I constructed a higher support 14" back from the front edge of the upper manual support.

Two horizontals, one 6" above base and the other 10" above that, will be required as part of the shelves - the lower should be just above the top of the toe end of your pedalboard frame, and the other should be positioned to allow your PC case to fit - my PC is in a cube case which fits perfectly in that space.



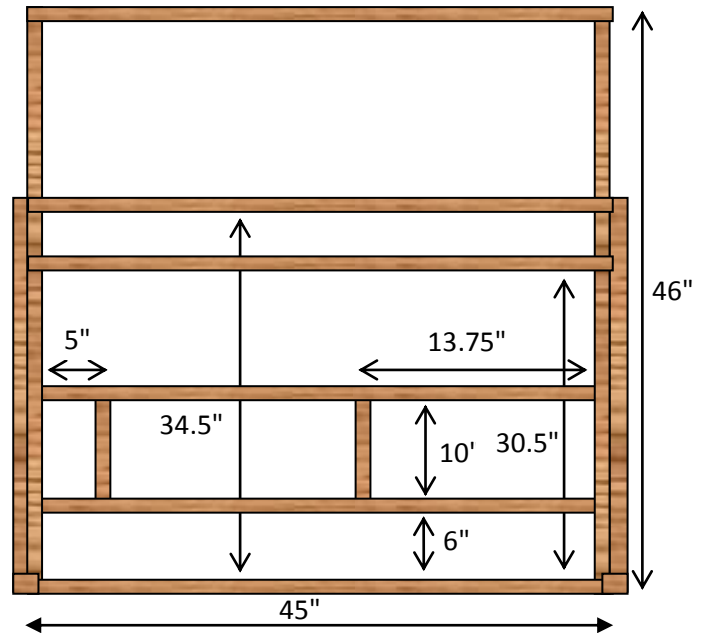
The two additional horizontal 1.25" x 0.75" on the horizontal at 6" above the base, at 4.5" (A) and 8.5" (B) from the rear are referred to further in 3. below. The one furthest forward provides support for the front 6mm ply board (C) which is angled in, directed backwards, at its lower edge.

3. The Front

I think that I must have been useless at technical drawing at school, as I had great difficulty with the front elevation for these plans! I hope that they are understandable!

The two lower horizontal members are in contact with the back of the toe end of your pedalboard frame. Mine are spaced 6" apart vertically so that the top one can sit on top of my pedalboard frame whilst the lower one limits the degree to which the pedalboard frame can be pushed back into the console. (Please see the website images)

Not shown on these drawings, but referred to in 2. above, are the additional 1.25" x 0.75" spruce horizontals that are required 6" above the base, at 4.5" and 8.5" from the back of the frame. The one at 8.5" provides a fixing position for the 6mm ply boarding which is angled in at its lower edge.



If you are fitting a Behringer FCB1010 MIDI Foot Controller as I have done, you will need to provide a *niche* for it. This will be cut out of the 6mm ply boarding fitted at the front in the 10" region immediately above your pedalboard frame. As my pedalboard has 30 pedal keys, my *niche* is cut 5" from the left and 13.75" from the right, which is not only the correct size for housing the MIDI controller but also results in the swell and crescendo (pedals A and B on the FCB1010) controllers being positioned correctly. Fix two pieces of 1.25" x 0.75" spruce between the front horizontal piece fitted at 6" above the base, and the one 10" above that. These two pieces will be angled back at their base because the upper edge is fitted 14" from the rear whereas the lower edge is only 8.5" from the rear.

4. Fitting the Ply Boarding and the Decorative Moulding

Cut 6mm ply pieces to fit over the tops of the lower manual support, the upper tier surface and the front face of the console back. This should be straight forward to fit: I glued and screwed the boards in these positions to their corresponding parts of the console frame. I hinged the ply board on the front face of the region immediately beneath the upper manual support and fitted magnetic catches, to provide easy access to the PCBs and Tapco MIDI controller. I fixed ply permanently onto the left side of the frame, but constructed a ply door with magnetic catches on the right hand side, to provide access to the computer.

The lower region between the top of your pedalboard frame and region immediately beneath the upper manual support will require a piece cut out for the FCB1010 controller *niche*. Owing to the angle where the lower edge is raked back by about 4", you will also need to score this piece of ply heavily at about 1.25" from its top edge and 2.5" from its lower edge, so that it can be gently but firmly coaxed into shape by bending it to fit the angle of the rake-back. Then you will need to line the *niche* with ply.

Fit decorative moulding around the front and sides and to every visible edge using carefully mitred joints.

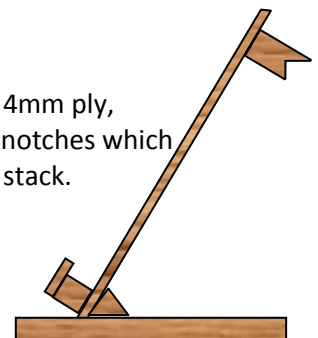
5. The Keyboard Stack

I constructed two side cheeks from 6.75" x 0.5" planed spruce, set so that each successive keyboard manual was 2.5" above, and 4.5" behind, the one below it. As the mounting of each manufacturer's keyboards are different, I will not give details, other than to advise that you support all three keyboards along their full length.

6. The Music Stand

My music stand is constructed from a piece of 1.25" x 0.75" planed spruce as a frame and 4mm ply, decorated around each edge with 1.2" decorative moulding. The side view is shown, with notches which help the stand to fit securely over the top of the back of the console behind the keyboard stack. My computer keyboard can be stored behind the music stand.

I hope this will help you with your console.



Kenneth Spencer.